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Case Study Scenario and Simulation: Supplementing a Student Nurse's Missed Foundational Clinical Nursing Experience

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CASE STUDY SCENARIO AND SIMULATION: SUPPLEMENTING A STUDENT NURSE'S MISSED FOUNDATIONAL CLINICAL NURSING EXPERIENCE

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Abstract

Optimizing clinical education for student nurses in a local associate degree nursing (ADN) program is essential to prepare them to become competent professional nurses. The focus of this project is to develop a case study scenario and related simulation for associate degree nursing students who are absent from clinical experiences in a foundational nursing class. An innovative approach to replace a missed clinical experience is an educational module utilizing a patient care scenario followed by realistic nursing evaluation and interventions in a simulation lab. Margaret Newman's theory of health as expanding consciousness supports this case scenario and simulation project. Bloom's taxonomy continues to be valued in education and provides a useful framework for this project. The instructor's role in interacting with the students during the case study with simulation is guided by Bloom's level of intellectual behavior: knowledge, comprehension, application, analysis, synthesis, and evaluation. This project provides the foundation for further development of nursing educational tools utilizing simulation technology to optimize nursing education.

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Chapter One

Optimizing the clinical experience for student nurses in a local associate degree nursing (ADN) program is essential for preparing them to become competent professional nurses. During a nursing clinical rotation, a student may be absent due to illness. The student's absence becomes an issue for many reasons. Precious time is lost in the clinical environment where the priorities of patient care are learned. Consequently, an assignment that reproduces what the student has missed needs to be created.

During an 8- week clinical rotation, the student experiences hands-on patient care. Each week students focus on one patient's medical issues and needed nursing care: head-to-toe nursing assessment, vital sign monitoring, pain control, and delivery of medications and personal care. Throughout the semester, the student interacts with seven different patients, learning about a variety of medical diagnoses and specific nursing care. Missing a clinical day or two is a significant educational loss for the student. The focus of this project is to develop a case study scenario and related simulation for associate degree nursing students who are absent from clinical experiences in a foundational nursing class.

Significance of the Project

The Minnesota Board of Nursing sets standards students need to achieve within a nursing education program. Compliance with the standards requires successful completion of the clinical rotation. The clinical rotation is also important because classroom learning is applied in the clinical setting, challenging the student to think critically and prioritize patient care needs, often with the opportunity to respond during crisis. Currently this ADN program has no alternative assignment for a missed clinical experience. This project provides students absent from a foundational nursing clinical experience an alternate activity to apply skills needed to be successful in the clinical environment by completing a case study with simulation scenario.

The need for alternative clinical education is very relevant and plausible to nursing education. An innovative way to address missed clinical time can be achieved by providing a student with an educational module describing a critical health incident followed by realistic evaluation and interventions in a simulation lab. The goal is to achieve the appearance of an actual clinical environment using case studies backed by simulation instruction. The case studies will include culturally specific scenarios to which the largely minority and immigrant student population of the college can relate. As Yoder (2001) discussed, educators can bridge a diverse population of nursing students by incorporating their knowledge, preserving their ethnic and cultural identity, and advocating for future change. Educators are shaping the future of nursing. Students must be able to assist patients of many different ethnic backgrounds and understand their culture to best meet their needs. To do this, educators can have students share their cultural heritage, and others can learn from them in the clinical environment. In this way,

students learn from their peers and feel involved and proud of their culture while building confidence in their nursing practice.

Observations during the first semester reveal students lack self-confidence and can be very hesitant to assess a patient's vital signs and blood glucose levels without supervision. The case study and simulation will include hands-on activities for students along with dialogue that requires critical thinking to problem solve. These activities will assist them to attain a level of confidence through practice. The skills in the scenario will be appropriate to the student's current education level and build upon past learning. This new project fills a longstanding need in the ADN nursing program. Instructors in the educational environment can be transformational leaders by using the most current technology and innovations to meet the needs of today's nursing students.

Theoretical Framework and Contribution to Nursing Knowledge

Many nursing theorists discuss educating students about key skills, but Margaret Newman's theory, health as expanding consciousness, supports this case scenario and simulation project. Her theory describes the universal process of expanding consciousness as part of the experience associated with illness. Through this experience, individuals find themselves at a better place in life, due to either a spiritual connection or a closer connection to others in the world. Newman sees health as a pattern of the whole that is a combination of person and environment; disease is one part of an individual's interaction with the environment. Individuals may face illness due to blocked energy fields within the body (Moss as cited in Newman, 1981). Describing "what may unfold unconsciously at one level of consciousness and finally present as disease may now be perceived as an energetic shift which becomes an unfolding process" (p. 75).

Nurses come into contact with many people who are expanding their consciousness as they journey through illness. Newman (1999) used pattern recognition to reflect a hermeneutic, dialectic praxis approach. Her approach is to search for meaning and interpretation through hermeneutics while having a dialogue with someone who may hold a differing view. Nurses should look for patterns in their patients' symptoms and their explanations about their situation. If an individual repeatedly initiates conversations about finances and pain, this pattern needs to be resolved. A social worker can assist the patient in resolving financial issues, and the presence of pain resolved through medication or holistic means. The nurse who is fully present with the patient through his or her journey will find insight into the meaning of the pattern.

Newman drew on the work of Arguelles (1987) who felt the nurse's presence would enable them to see the patient's truth in their situation. The nurse's actions and response would be guided by the emerging pattern. From this perspective, the evolving unitary pattern of the whole is observed through pattern recognition and meaning applied to crisis or illness in their lives.

Newman provides nursing with a practice model to follow as a transformational leader operating from a unitary perspective. Her theory supports what occurs as the nursing students progress through their 8-week clinical rotation. Significant learning is needed during a short time. Students will see how they've grown and expanded their consciousness at the end of the clinical experience. Because student growth will be compromised when clinical experience is missed, a mechanism is needed to replicate the clinical experience. Newman's theory will provide the theoretical foundation for creating the case studies with simulation for this ADN program.

While different educational theories exist, Bloom's Taxonomy (1956) continues to be valued as a hierarchy of educational levels important in adult learning and will be used as a guide to achieve this project's goal. Bloom created a tiered model of classifying thinking according to six cognitive levels of complexity. The levels of learning, knowledge, comprehension, application, analysis, synthesis and evaluation, will be considered in the development of the case studies and simulation project. The student begins the case study by reading the scenario. This is new knowledge for the student and some wording may need to be researched if not known. The student will also write out the pathophysiology of the patient's medical diagnosis. The instructor observes the student's comprehension and critical thinking skills through discussion and application of specific patient information. The student will demonstrate his or her assessment skills through use of a manikin and then display understanding of the patient information including diagnosis, procedures, medications, and treatment. After analysis of patient information, the student will apply the information by developing a care plan for the patient. During simulated assessment, the student will respond to prompts from the case study or the instructor to demonstrate synthesis of the patient's needs based on the assessment and the patient's diagnosis. Role playing may also be a part of this simulated experience to develop the student's communication skills. Synthesizing the patient information prepares the student to identify a priority of care for the day. After the student completes the case study with simulation, the instructor will evaluate and debrief the student while allowing him or her to ask questions to determine the student's comprehension of the exercise. This evaluation shows the student strengths and

weaknesses, gives instructor feedback to the student, and supplements the student's missed clinical experience in a safe environment.

The entire health of the patient will be included in the case study with simulation experience. A key element of this simulation model is to expand the student's awareness of the patient's world. The nurse must communicate effectively with the patient to understand the patient concerns. As Larew, Lessans, Spunt, Foster, and Covington (2006) discussed, simulation provides a positive opportunity for the nursing student to learn. Protocols can be developed with the learning needs of the student in mind to assist students in patient management, communication skills for problem solving, and good critical thinking skills. By producing a case study with simulation for the nursing students, a safe environment to practice these skills is provided in the nursing laboratory.

Optimizing the clinical experience for student nurses in an ADN program is important in preparing the professional nurse. Students absent from a foundational clinical experience may achieve the skills needed to be successful in the clinical environment by successfully completing an assigned case study with simulation scenario. The case studies with simulation will be developed to support the student's level during the clinical rotation.

Chapter Two: Review of Relevant Literature

This project addresses the need for an alternative teaching method when students miss a foundational nursing clinical experience in an ADN program. The clinical rotation is a critical part of nursing education because it provides an opportunity for the student to think critically and gain confidence. Missing even 1 week of clinical experience significantly limits the student' opportunity to encounter real patient situations. Experiencing actual interactions in a busy medical environment is important to students' education. They need to observe how the different health disciplines communicate to facilitate a patient's recovery. They also need to learn how to talk to the patient, gain the patient's trust, show caring, listen, and determine the patient's present needs. The clinical rotation provides the venue for students to apply academic knowledge to practice. Research by Del Bueno indicated that while students are able to understand academic content, they still do not show sound critical judgment upon graduation. As he noted, (as cited in Horan, 2009) "only 35% of new RN graduates . . . meet entry expectations for clinical judgment" (p. 28). Any missed days of clinical experience, therefore, can be detrimental to students developing strong critical judgment in a real-world scenario.

The development of an educational tool to supplement a missed foundational nursing clinical experience is important to the successful completion of this first semester nursing program. This project will present students a case study with simulation. The case study will include the past medical history of the patient, present problem, prescribed medications, and specific doctors' orders. It will also include family and social history as well as religious background. The safe learning environment of the simulation allows a student to make mistakes without repercussions to the patient.

Protocols can be developed to focus on the learning needs of the student and expand his or her skills in patient management, communication, and problem solving (Larew et al., 2006).

The ADN program for which the project is being developed is in a large urban area with a diverse student population. Many immigrant, English as Second Language students have entered the program, having achieved the level of success necessary for admission. The student population also includes many older adult learners. Some are returning to school to increase their education and enter a professional field while others are seeking advanced training to move laterally into new fields.

This chapter reviews current research about using case studies with simulation in nursing education. This research provides support for the project's theoretical framework and methodology.

Theoretical Foundation

The theory health as expanding consciousness Margaret Newman (1999) developed provides the nursing theory for this project. A case study with simulation allows students to enhance their nursing experience through hands-on activities that incorporate visual, tactile, listening, critical thinking, and communication skills, taking students to a new level of interacting with patients and other medical professionals. Newman's theory offers a method of approaching the patient as a whole rather than looking at only one aspect (the specific health problem) of the situation. In addition, this project draws upon Bloom's Taxonomy to develop the educational approach for the case study and simulation.

Nursing Theory

Newman's (1999) theory health as expanding consciousness, stresses the importance of the nurse entering into a partnership with the patient. Originally, Newman's theory was meant for patient and researcher but has expanded to the nurse and patient interaction. The nurse observes a pattern in the patient's behavior or expressed concerns and rephrases the discussion to the patient, allowing him or her to see the current situation more clearly. This is called pattern recognition. The nurse has to be nonjudgmental and present in the moment for this relationship to occur. The intent of Newman's theory is to embrace the unfolding pattern of the whole, with the nurse seeing a pattern of current concerns resulting from the patient's illness and bringing them to the patient's attention so the patient can see the pattern emerge. This new information helps the patient reach a higher level of consciousness and organization in his or her life. Health as expanded consciousness works with the present and evolving pattern.

Newman (2008) discussed Jose Arguelles's view that the universe is information, and resonance is the essence of information. Arguelles believes each individual should stand in the center of truth because each person has access to the truth of the universe. If allowed, this truth will open and guide nurses in their relationships with patients and one another. This perception separates what is said or done from what is felt. Nurses must be open to what is meaningful to the patient; in doing so, the communication will be felt. Newman referred to this as a resonance or wave phenomenon, a feeling that occurs instantly and does not require verbal communication between the nurse and patient. The nurse's communication resonates with, or is felt by, the patient.

Newman's (2008) theory of health as expanding consciousness does not mean making connections between things that one already knows, but rather seeing things differently with a new perspective. Newman stated that science deals with three levels of understanding: the biological (sensory), the mental (symbolic), and the subtle (trans-symbolic). Friedman (as cited in Newman, 2008) said, "The subtle level can never be entirely understood through the concepts, logic and thought of the mental level. To reach such understanding requires direct access, insight, or transcendence to the subtle level" (p. 61). A shift from the symbolic to the subtle level is a change in the angle of vision. In learner-centered activities such as simulation, students bring their own experience and culture to the situation, which allows them to engage as full human beings (Yoder, 2001). When nurses bring themselves into the relationship with the patient, the two act as "partners in the evolving pattern" (Newman, 1999, p. 85).

Education Theory

Bloom's Taxonomy

Bloom's Taxonomy, first developed in 1956, continues to be valued in education and provides a useful framework for this project. The case study and simulation will be designed to engage students in all six of Bloom's learning phases. The importance of the case study with simulation is to build upon the knowledge from didactic classroom experience. At the start of the case study, students must engage with Bloom's first stage of learning, knowledge. Students need to have a grasp of the material. After reading the case study scenario, they may have to look up the diagnosis if they do not understand it. One area of the case study will require students to research the pathophysiology of the patient's medical diagnosis. They will also have to determine a nursing diagnosis based

on their knowledge, write a care plan, and fill out a collection tool worksheet as part of the case study. These tasks involve students' knowledge of the assessment process and how it relates to the different areas of the body (collection tool worksheet).

Comprehension, the second of Bloom's phases, present the opportunity to identify the student's comprehension and application of the classroom learning. Students enter the case study and simulation in terms of whether they recognize any symptoms the patient may be presenting and whether they recognize that certain procedures may need to be done. Students will also have to show they understand the correct order of these procedures. For example, in reading the case study, students will see that the physician has ordered a catheter and a "fleets" enema. This provides the student the opportunity to locate and identify the necessary supplies and to use new skills by implementing the ordered procedures. The instructor will determine students' comprehension by asking questions of the student or by observing how the student prepares to care for the patient.

The application phase of Bloom's Taxonomy requires students to apply the information they have learned so far in their nursing program. After receiving a written report from the day nurse for the case study with simulation, students will actually prepare and carry out their assessment on the manikin, as well as insert the catheter, administer the enema, and follow any other physician's orders. The instructor is able to observe students' actual practice of safety/hand washing and communication skills with their patient. The instructor can also see whether students are confident in carrying out these newly learned skills.

In the analysis phase, students will need to compare and examine the physician's orders, medications, and what the patient stated in the assessment and determine what

needs to be done. They may need to call the physician or pharmacy to clarify an order or get further information. Distinguishing issues and differentiating the many aspects of the order shows the students' critical thinking skills in the simulation environment.

Students will be required to identify a priority of care for the day. To do so, they must synthesize the information they have gathered. Students will also have to understand when they may need to make a change in their plan (if the patient shows new symptoms, for example). The instructor will assist students in their critical thinking or give prompts if the information is not being synthesized clearly.

After students complete the case study with simulation, the instructor will debrief them and evaluate their performance. This evaluation offers students an understanding of their strengths and weaknesses on the case study with simulation. Students may choose to explain or defend why they chose to do things in a certain way or how they came to their conclusions. The instructor can assist students in correcting their thought process or offer ideas to help them develop their critical thinking. The instructor's observations will help students identify areas that need work. Utilizing Bloom's full process in the case study with simulation enhances students' clinical experience.

Bridging Theory

Because the population for this study consists of adult learners from multicultural backgrounds, practices that address their particular needs will be used. Second career adults returning for education have broader wisdom and experience, so the learning in the clinical post-conferences is at a higher level. The older students ask more questions and bring life experience to the classroom while the students from diverse cultures bring different perspectives with broader implications to the learning environment. The case

study and simulation will address these demographic and cultural characteristics of the student population through Yoder's bridging approach.

Yoder (2001) advocated teaching methods that are modified to meet the cultural needs of the students, referred to as a bridging strategy. That is, the teacher reaches across the cultural gap to meet the students on their terms. Yoder suggested that educators encourage students to maintain their ethnic identity. But minority students face barriers in the clinical environment. One barrier that Yoder mentioned is the low expectations minorities often encounter: they are not expected to succeed at the university level. Minorities may experience unfavorable faculty attitudes, lack of faculty cultural awareness (students can bring insights and experiences about their culture to the clinical environment), and possible unfavorable peer group attitudes.

Yoder (2001) identified four strategies to bridge the gap among nursing students: incorporate the students' cultural knowledge, preserve cultural and ethnic identity, facilitate negotiation of barriers, and advocate for system change. The case study with simulation will incorporate diversity and cultural content, as Yoder discussed, to encourage confidence among students in the ADN program to bring their own cultural knowledge to the table. More ethnic role models are needed in nursing; incorporating cultural teaching in the case study and simulation will bridge this gap, provide a higher level of instruction to meet real world situations for the students, and help produce more minority nurses and educators.

Literature on the Methodology

Case Study and Simulation

Case study with simulation teaching enables students to interact with their patient and observe a pattern evolving, then reflect the pattern back to the patient. In the case study, the instructor can assume the role of the patient and cue the student to the patient's current needs. The newer manikins used in simulations can be programmed to speak, allowing the instructor to indicate that the patient is in pain, worried about finances, or reacting to a variety of psycho-social issues. The case study and simulation can be used to encourage the student to see the "human being as a unitary phenomenon unfolding in an undivided universe" (Newman, 1999, p. 82). The nursing student must consider all aspects of a patient's life before becoming ill to help the patient reach a renewed wholeness. A nurse can assist a patient to reach a new level of understanding of his or her current situation, whether this involves end-of-life issues, letting go of the past, or coping with the effects of the illness.

Case study with simulation has been researched fairly extensively as a teaching model, and most studies support its effectiveness. The results of these studies will inform the project design. Larew et al. (2006) studied 190 adult nursing students from the Baltimore School of Nursing who engaged in a case study with simulation using Benner's (2004) conceptual framework regarding the performance features of nurses with different levels of clinical proficiency. Benner's model describes the path the student takes to move from novice to expert through education and experience. The researchers learned three lessons. First, the case study developers decided to focus on one problem at a time rather than multiple patient problems to decrease complexity. Second, problem

presentation can use both student and teacher centered approaches. While the simulation was student-directed overall, students can address the problem themselves first but also be given prompts until the problem is resolved. Third, they learned the appropriate pacing. Pacing can be determined by watching the student's body language and actions. The protocol Benner used supported learning in the clinical environment. The feedback loops within her model assisted the students to identify appropriate interventions and practicing interdisciplinary communication skills. In the case study with simulation, the student will get to practice these communication skills with the manikin and then identify the interventions needed. Because simulation continues to be an added opportunity for instructing students, it has been widely accepted as another way to instruct nursing students.

Simulation

Tanner (2006) noted simulation has gained acceptance as a teaching tool in the health profession. A review of 109 studies on simulation in medical education (Issenbergm, McGaghie, Petrusa, Gordon, & Scalese as cited in Tanner, 2006) supports 10 features of high fidelity simulation that lead to effective learning: immediate feedback, repeated practice, integration with course content, stratified learning, flexibility to different learning strategies, changeability of case study, safe learning environment where students can correct errors, active learning, identifiable outcomes, realistic simulation. Three of these features are key for this project: learner-centered activities (active learning), providing a safe learning environment, and repeated practice, which develops students' confidence. Research about all three will inform the project.

Simulations provide learner centered activities.

The simulation will incorporate learner-centered activities to help students learn complex content as Brannan, White, and Bezanson (2008) discussed. Traditional classroom structure and human patient simulator are the two types of instructional methods considered. The researchers found that traditional classroom instruction (lecture) was less effective than high-fidelity simulation. Students who took part in the simulation scored higher on post-tests than those who received traditional instruction.

Simulation is also presently used as a teaching strategy that uses learner-centered activities and interactions between people from different cultural backgrounds. Encouraging nursing students to see their relationships with patients as a "sociocultural dialogue" (Jefferies, 2007, p. 23) helps nurses with pattern recognition and allows patients to reorganize their sense of wholeness with the universe. Jefferies (2007) developed a Nursing Education Simulation Framework with five components. These components are the teacher's role, the student's role, educational practice, simulation design characteristics, and outcomes. In this framework, the teacher is essential and assumes the roles of facilitator and evaluator. Students' roles are response and process-based. In the response-based role, the student is not an active participant and not in control of material. In the process-based role, the student plays an active role and is able to access information, make decisions, and communicate with the patient. The proposed supplemental clinical case study and simulation project will use the process-based role. The framework also includes educational practices such as active learning, diverse learning styles (visual, auditory, tactical and kinesthetic), collaboration, and high expectations.

In discussing simulation design characteristics, Jeffries (2007) noted the tools that guide learning are the objectives. The objectives are very important to the case study and simulation. In problem solving, producing a product to relate to the complexity that meets the students' skill level is important. The educator needs to focus on objectives and skill level when preparing the case study. The educator also determines how support can be given to the student. Usually support is in the form of cues. Student reflection along with a debriefing with the teacher identifies for students their performance and gives feedback on their actions, communication choices, and decisions in the simulation. The final section of the simulation framework is outcomes. The instructor evaluates whether the student gained critical thinking skills, knowledge, performed tasks in a safe manner, and gained self-confidence.

Jefferies' (2007) review of the framework for simulation provides numerous ideas for making a case study with simulation. Jefferies stated simulations in education are most often grounded in theories that focus on learner-centered practices, social cultural backgrounds, and collaboration. "These metaphors point to a view of learning as information processing that is respectively cognitive skill; experiential growth and pattern recognition and sociocultural dialogue" (p. 23). Newman's theory with pattern recognition fits with Jefferies' philosophies.

Simulations provide a safe environment.

While students benefit from learner-centered activities, they require a safe environment in which to practice their skills. The need for case studies with simulation is supported by the Institute of Medicine's (IOM) (1999) initial report in the Quality of Chasm Series, *To Err is Human: Building a Safer Healthcare System*. This report found

that of all health care providers, nurses spend the most time with patients during their hospital stay and recovery. Nurses are in the best position to see patterns and understand patients' needs. The nurse's critical thinking skills are extremely important. If an order is written for the patient to receive nothing by mouth, but oral medication is to be administered, the student is challenged to analyze these contradicting orders. The student may call the physician for clarification. Certain medications, such as blood pressure pills, may be given. Ultimately, the patient's safety is at risk if the nurse is unable to think critically and quickly in his or her environment. In the simulation setting, students have an opportunity to make decisions in a safe environment. They promptly receive feedback from the instructor following the case study with simulation as to whether they were correct or incorrect in their thinking. This may not happen as soon in the clinical environment.

Guhde (2010) discussed how students had difficulty distinguishing clinical information and responding to it. The study examined an online learning assignment with high fidelity patient simulation to assist students in analyzing their thinking while they addressed clinical issues. Out of 80 students who completed the evaluation on a 5-point Likert scale, they stated the most meaningful learning came from considering all the information. They felt the scenario should not change. Olejniczak, Schmidt, and Brown (as cited in Guhde, 2010) agree that case study with simulation helps students learn in a safe and confident manner. The authors discussed an assignment on critical thinking that uses high-fidelity simulation to help students analyze their thinking. The design of this project reflects the belief students must first analyze their critical thinking to change their thinking and behavior. Between the case study and simulation, students will be provided

with a number of questions to assist them in different events that may arise. This will help hone their critical thinking skills.

Jeffries (2007) emphasized providing students an opportunity to learn and make mistakes in a controlled and safe environment. Moving from a less to a more complex scenario, students can incorporate skills and train in a safe environment prior to attending their clinical site with real patients. This incorporates Newman's philosophy of health as expanded consciousness. The student is increasing his or her awareness and reaching a higher level of consciousness prior to reaching the clinical site.

Simulations develop confidence and critical thinking skills.

Since this proposed project focuses on students in their fundamental clinical rotation, they are very dependent learners in both how they approach patients and in the questions they ask. The simulation will focus on developing students' confidence and ability to act independently. Students will need to think critically and learn to act interdependently to interact with other medical disciplines within the hospital.

In the clinical setting, students learn communication skills to interact effectively with their patients. The purpose of education is to assist students to move from dependence to independence, becoming confident thinkers who apply sound judgment (Musinski, 1999). Independence is important to teamwork because all members of a multidisciplinary healthcare team rely on one another to meet a patient's needs. When the paradigm of "we" is realized among team members, it indicates that interdependent communication has been obtained (Covey as cited in Musinski, 1999).

Musinski (1999) presented teaching strategies for learner-centered activities to move the student from dependent, to independent, and then interdependent learner, along

with strategies to transition from teacher to facilitator in the clinical environment. Integrated within the nursing clinical experience for students is effective communication with their patients. To encourage interdependent action such as Musinski discussed, the proposed case study with simulation may have the student place a telephone call to a physician and receive an order; the student may also have to follow-up by phoning the pharmacy.

When learning in a safe environment such as a simulation lab, students not only learn safety but increase their confidence. Leigh (2008) conducted a literature review of research on high fidelity simulation effect on nurses' confidence levels. Through this literature review, Leigh found students can apply the knowledge to practice, learn from their mistakes, and identify gaps in their knowledge. Through the simulation, faculty were able to identify skills challenging students and determine problems in their comprehension of theoretical nursing knowledge (Leigh, 2008). Only when nurses have confidence in their own skills can they begin focusing on their patient. White (as cited in Leigh, 2008) found development of self-confidence is based on making good clinical decisions and understanding the clinical picture. Jeffries and Rizzolo (as cited in Leigh, 2008) reported higher degrees of self-confidence after participating in high fidelity simulation.

In another study, Bambini, Perkins, and Washburn (2009) administered a survey to a sample of 112 students about their confidence level in postpartum and newborn nursing both prior to and after the clinical experience. Three themes emerged: increased communication, confidence, and clinical judgment. The results showed students felt more confident after the simulation about how to conduct themselves in the clinical

setting. The post-partum exam self-efficacy scores revealed an increase in confidence in performing a post-partum exam after the simulation experience. They also increased their confidence when assessing the uterine fundus. This type of confidence is important for a nurse to acquire to move forward in meeting other nursing skills. Patients are also able to sense when someone does not feel confident.

Simulation has also been helpful in increasing students' confidence in teaching their patients. Wagner, Bear, and Sander (2009) designed training with simulation for nursing students in the area of post-partum labor and delivery. The aim was to improve students' confidence, skills and delivery of proper education to mothers and their newborns. After the students learned in simulation, they were able to apply their learning to the mothers of newborn infants. The mothers benefitted from the individual instruction from a nursing student, and the student acquired the needed learning through simulation. The experience also aided the students to gain confidence educating and training a new mother while developing their discharge planning skills.

Melnyk (2008) developed a simulation and competency for a nurse residency program to ensure nursing competency, confidence, and readiness to enter practice. The nurse's scores from the second to tenth week increased in these three areas. Of the students, 95% felt they increased in their confidence, and they enjoyed the simulation scenario.

Cant and Cooper (2009) found simulation to be an effective teaching and learning method. Six of the twelve studies showed increased gains in confidence, critical thinking, and knowledge compared to a control group. They agreed simulation may have advantages over other teaching methods depending upon the context.

Summary

Newman's (1999) health as expanding consciousness provides the nursing theoretical foundation of this project. Newman's theory allows the student to approach the patient as a whole versus looking at only one aspect of the illness. Bloom's Taxonomy's (1956), six learning phases of knowledge comprehension, application, analysis, synthesis, and evaluation, will be incorporated into this case study with simulation to assist the educator to guide the student to make up a missed clinical rotation. Yoder's (2001) bridging approach aids educators reach their multicultural students. As Yoder indicated, adult learners from diverse backgrounds have much to add to the clinical environment and post-clinical discussions.

Studies confirmed case study with simulation is a successful teaching method because it provides hands-on and learner-centered activities in a safe learning environment where students' confidence can be increased. Simulation is used as a teaching strategy to provide learner-centered activities to teach complex skills. Jeffries (2007) provided a framework for making a simulation model to provide a safe learning environment. Practicing skills on a manikin allows students to move from a less to more complex tasks in a safe manner. Developing student nurses' confidence and critical thinking skills is extremely important. Musinski (1999) described three levels of communication while Melnyk (1999) used a residency program to ensure nursing competency, confidence and readiness.

Evidence supports high fidelity simulation as an effective teaching and learning method. The literature review reveals case studies with simulation can enhance learning

by empowering students: all the literature reveals need for further research in this area.

In the upcoming chapter, the case study with simulation will be explained.

Chapter Three: Development of Practice Model

This chapter details the case study with simulation created to address a missed session of an ADN foundational, clinical educational experience. Newman's theory of health as expanding consciousness and Bloom's Taxonomy inform this project. In preparation for this case study with simulation, the ADN nursing program's first semester clinical syllabus was reviewed for consistency with the course objectives. The skills and the learning phases to incorporate into the case study were derived from these course objectives (see Appendix A). The case study with simulation has seven distinct elements: patient information page, pathophysiology page, medication administration record, data collection tool, care plan, general questions, and evaluation/feedback. Three forms from the course syllabus were integrated into the case study (care plan, data collection tool, and medication administration record). The institution's students and the metropolitan area in which they practice are culturally diverse, so the case study patient of Somali decent and a practicing Muslim, will reflect this multiculturalism. This chapter will describe instructor and student preparation, the seven different areas of the case study, and application of both Newman's theory of health as expanding consciousness and Bloom's Taxonomy and implementation of the case study.

Development of the Project

Instructor Preparation

The nursing lab instructor will maintain an electronic copy of the case study with simulation and will use a printed copy when administering the case study. The student who has missed a clinical educational experience will make an appointment with the lab instructor, or the student's didactic instructor, to complete the case study with simulation.

This educational exercise will require 3 to 4 hours. The lab instructor will reserve the simulation room and prepare the manikin for the simulation. Guided by the patient information page of the case study, the lab instructor will set the blood pressure and pulse and respirations to the higher level to imply the presence of pain, along with having bowel sounds absent in all four quadrants. The abdomen will be hard and tender to touch, and lung sounds will be programmed as coarse to replicate consequences of smoking. A tegaderm bandage will be applied to the manikin's right buttock to simulate the patient's stage one decubitus ulcer. As the simulation progresses, the instructor can program the manikin to answer questions regarding pain. The instructor will observe the student's skills inserting the urinary catheter, administering a tap water enema, and phoning the physician to clarify orders about giving medication. Throughout the case study with simulation, the instructor will assess the student's communication skills, knowledge, comprehension, and ability to analyze, synthesize, and apply patient information.

Student Preparation

Upon the student's arrival, the instructor will give a copy of the case study to the student and indicate the 3 to 4 hours needed to complete it. The instructor will direct the student to communicate only with the manikin or instructor during the simulation. The student will be allowed to use a medication resource book as well as theory, physiology, and care plan books plus any other books in the lab as resources. The student will read all parts of the case study before beginning. Once the student finishes the case study with simulation, the instructor will evaluate his or her performance and provide feedback.

Element 1: Patient Information

The first element of the case study scenario is a patient information page (see Appendix B). This element meets the objectives of students demonstrating their hand washing skills and completing a full patient assessment including vital signs.

Therapeutic communication skills demonstrating caring and the nursing organizational process will also be observed. The student will read information about the 58-year-old-female patient: name, age, religion, relationships, lab work, and reason for presentation to the hospital. The patient's past medical/surgical history, a report from the previous nurse, and physician orders will have been written. She has a strong social network of family and friends who support her. Her family has brought her to the emergency department because she complains of abdominal pain. The patient was admitted to the medical floor during the day shift, and the student will be assuming the 3 p.m. - 11 p.m. shift to care for the patient.

Upon admission, the nurse learns the patient has not had a bowel movement for the past 9 days and also has a painful stage one decubitus ulcer on her right buttock. The patient's past history indicates stage 1 breast cancer with a right mastectomy with sentinel node dissection, along with a right salpingo-oophorectomy and hysterectomy. The present situation could indicate a possible impaction, ileus, or tumor. The patient is presently incontinent of urine and will require a urinary catheter, enema, and dressing change on her right buttock.

If a student does not understand a definition, diagnosis, or order, he or she will have an opportunity to research information before entering the simulation room with the patient (manikin). The instructor will have resources available such as a medication

book, theory, physiology, and care plan books. After the student reads the patient information sheet, she or he will ask the instructor to begin the simulation. The student will be expected to wash his or her hands, enter the simulation room to introduce himself or herself to the patient, apply gloves, and discuss plans for care with the patient while taking vital signs and completing a full patient assessment.

The instructor will observe the student's basic nursing skills (hand washing, glove use, vital signs, and assessment skills) and communication skills to determine if he or she is picking up the pattern the patient reveals. If the patient discusses the past 9 days without a bowel movement along with increasing amounts of pain each day, the nurse should be alert to the verbal pattern of "pain." Pain may indicate bowel obstruction or possible ileus. The instructor will be observing the student's critical thinking skills when considering the patient's complaints and history, expecting the student to collaborate with the physician for a possible abdominal x-ray. The instructor will also evaluate the student's organization and prioritization of tasks throughout the simulation exercise.

The case study will have some complicating scenarios the student will need to address. The simulation will include the patient asking, "Can I pray in my room" or five female friends requesting to spend the night in the patient's room. The student must help the patient by identifying the hospital's policy and provide an answer. Follow up to this phase of the case scenario helps students evaluate what skills they applied to the actual case and whether they achieved the best outcome.

Newman (1999) reveals every person is a part of expanding consciousness – the ability to become more aware of one's own life through relationships with others and an understanding of the interconnectedness of life's events. Newman's health as expanding

consciousness discusses the significance of patterns that evolve from person-environment, and interactions. The nurse is uniquely positioned in relationship with a patient to recognize patterns patients demonstrate as they share their life stories. The student's ability to communicate well with the patient and be an active listener contributes to the student's ability to recognize patterns that impact the patient's sense of wellness or well-being in spite of challenges disease or illness present. Newman's pattern recognition guides the nurse to be alert for themes and relationships between the events and circumstances within the patient's life. It is important for the nurse to understand the whole situation in a person's life to guide the patient to identify patterns from underlying causes or concerns that contribute to illness. Seeing these patterns will assist the patient in coping with his or her present illness. The student can repeat to the patient what has been said or observed; the patient may then be more aware of the pattern with increased understanding. In this specific case scenario, the pattern will focus on the patient's abdominal pain and right buttock pain. The simulator will be programmed to express pain that is expected to identify as the priority and leave the room to obtain pain medication along with morning medications. The patient's vital signs will be elevated due to pain and hypertension.

Beyond experiencing pain, the patient may be expressing worry about family and feeling disconnected from family and community in her homeland. Newman and others associate serious illness with childhood losses of family relationships (Picard & Jones, 2005). This may also be a part of the pattern of the patient's overall experience with illness. The student nurse should take note of these concerns to help identify all the

different types of pain –in this case, emotional versus physical— the patient is experiencing.

Bloom's Taxonomy guides the instructor to evaluate whether the student's skills include synthesizing knowledge of the physician's order to discontinue oral intake with knowledge of the patient's hypertension and need for prescribed medication. This conflict between a physician's order and a patient's need, when understood as a conflict, will guide the student to contact the physician for clarification. The instructor will also assess if the student realizes a prior right mastectomy with node resection precludes the use of the right arm for blood pressure monitoring. The instructor further evaluates the student's skill to analyze and synthesize patient information as critical thinking.

Bloom's Taxonomy guides interactions in the simulation. The instructor will evaluate the student's knowledge of different diagnoses and comprehension of the information. From the physician's orders, the student should determine the need to prepare to give an enema and insert a urinary catheter. This information should then assist the student to organize and prioritize tasks for the day. The instructor will observe how the student prioritizes after speaking with the patient. After the student administers medications, inserts a catheter, gives an enema, changes the buttock dressing, and turns the patient, the simulation is complete. The student then proceeds to the case study documentation. When completed, the instructor will review and evaluate the student's written work.

Element 2: Pathophysiology Worksheet

The second element of the case scenario will direct the student to describe the physiology of the patient's current condition (see Appendix C). This element meets the

objectives of students researching the patient's medical diagnosis. Students use this worksheet weekly during their clinical experience. The student describes the disease at the tissue and cellular level; provides risk factors and etiology of the disease; and lists signs, symptoms, complications, and long-term issues that may arise. Prior to meeting the patient or after completing the stimulation, the student will answer the questions on the pathophysiology sheet based on the patient's current symptoms. In this case scenario, the student could research breast cancer, salpingo-oophorectomy, hysterectomy, hypertension, stage 1 decubitus ulcer, and abdominal pain.

Bloom's Taxonomy again provides the foundation for the instructor/student interaction. The student is learning new knowledge and applying and analyzing the knowledge as it relates to the care of this patient. The instructor will evaluate the student's application, analysis, and synthesis of the case study information during interaction with the patient.

Newman's theory applies when the student comes to a higher level of consciousness through researching the patient's history and medical issues. Through this research the student identifies the social history that may be affecting the patient presently. This patient experienced social unrest in Somalia and loss of family connections by leaving the country. This past stress can be reactivated by the current stressor of hospitalization. This information provides the student a broader view of the patient's situation, guiding the student's discussion with the patient. The discussion can aid the patient to also reach a higher level of consciousness about her health issues.

Element 3: Medication Administration Record

The third element of the case scenario is the medication administration record (see Appendix D). This element meets the objectives of students safely administering medications and exhibiting documentation skills. The medication administration record will list medications the physician ordered, times of administration, and the patient's allergies. Medications to be administered as needed, such as pain medications, are also included. The instructor will observe if the student recognizes the physician's orders include nothing to be taken by mouth (NPO), and the conflict created by the patient's need for hypertensive medication. Recognizing the need to call the physician to clarify the order will demonstrate critical thinking skills. If the student's synthesis of medication information with the patient's medical information does not occur, the instructor may prompt the student by asking a question. Durham and Sherwood (2008) discussed the importance of using strategies, such as phoning the physician, to increase quality and safety awareness in working with patients. Educators are expected to teach students knowledge and skills that define safe practices (Durham & Sherwood, 2008).

After the student phones the physician and receives the order to administer the hypertension and pain medications only, the student can prepare the medications and proceed to the patient. The instructor will observe the student safely preparing the medications and administering them. The student should then document the medications. The simulation is a safe environment for the student to practice administering medications. Research shows simulation increases safety and decreases errors while giving the instructor the opportunity to evaluate clinical skills (Bearnson & Wiker as cited in Harder, 2010). The instructor may forego medication administration if time does

not permit, but discuss the medications, their indication, and patient education needed at the time of administration.

Bloom's Taxonomy guides the instructor to discern if the student is analyzing the medications correctly, knows the medications, and can determine which ones should be given and which ones should not be given. Newman's pattern recognition also applies here. The patient has expressed feeling abdominal and buttock pain. She is also irritable and refuses the pain medication. The instructor will observe and determine whether the student listened and communicated with the patient (manikin), explaining the medications' purpose and reason for administration while asking questions and determining the pattern of pain.

Element 4: Data Collection Tool

The fourth element of the case scenario is a data collection tool (see Appendix E). This element meets the objectives of students collecting and reporting data. The data collection tool is used as part of the weekly clinical homework. The student will complete this tool after the simulation exercise. Students divide their patient assessment into six areas: oxygen, nutrition, elimination, physical comfort and safety, optimal rest and activity, and discharge plan. The student will write the medications and information pertaining to each area. For example, the patient in the scenario will be unable to eat or drink. The nutrition section will state "patient diet". The student will fill in NPO. The student must read the case study, assess every area of the patient's (manikin) body, and consider communication with patient to accurately fill out the tool.

Bloom's Taxonomy applies as the student will demonstrate comprehension of the information obtained by discussion with the patient and reading the information page.

The medication page is important because every section of the data collection tool applies the relationship of prescribed medications to each body system. Researching the actions of prescribed medications and applying how the medications are intended to treat the specific patient are important to developing the critical thinking skills of the student. Newman's theory describes the importance of gaining new knowledge in the process of reaching a higher level of understanding for the student. Bloom's Taxonomy guides the instructor's expectations of the student during the learning experience.

Element 5: Care Plan

The care plan is the fifth element of the case scenario (see Appendix F). This element meets the objectives of students demonstrating psychosocial nursing care, nursing interventions, and the rationale for this specific patient. The student compiles the plan after finishing the initial patient interview. The student identifies the patient's priority issue and decides how to address it during his or her shift. Although the student may write the care plan later, he or she should determine "pain" is the nursing diagnosis relating to the abdomen, as evidenced by lack of a bowel movement for 9 days. The student will identify the nursing diagnosis, followed by two short - and one long-term goal, with six interventions and rationales. The student is expected to include citations of books used to create the care plan. The instructor will evaluate the student's prioritization of patient care needs. Through the student's communication with the patient, the student will determine pain is the patient's primary issue. The student should include interventions such as turning the patient every 2 hours, as well as providing pain medicine, to relieve pressure and discomfort due to the stage 1 decubitus ulcer. Administering an enema should be discussed as therapy to initiate peristalsis for bowel

evacuation. Bloom's Taxonomy is applied by the instructor who evaluates the student's comprehension of information in the case study and demonstration of critical thinking skills to apply, analyze, synthesize, and identify the proper nursing interventions to support the patient's recovery.

Element 6: General Question Page

The student will answer general questions regarding this patient for the written portion of the case scenario (see Appendix G). This element meets the objective of students demonstrating growth in the nursing role. The questions will address the specific nursing skills and query the student's understanding of cultural practices and beliefs that may impact this patient's healthcare. The student's answers will allow the instructor to evaluate the student's critical thinking skills. The general questions page allows the student to think about the patient's cultural, emotional, and spiritual needs.

Element 7: Evaluation/Debrief

The evaluation/feedback phase will be the last element of the case study with simulation. This element meets the objectives of students also demonstrating growth in the nursing role and their use of the nursing process. The instructor will answer student questions, evaluate the student's strengths and weaknesses, and identify areas needing attention. If the instructor identified the student was not connecting with the patient, guiding the student to use his or her own ethnic, cultural, and religious value systems to relate to the patient will be valuable as Yoder (2001) suggested. For instance, if prayer is important to the nursing student, he or she can see similarities to the Muslim patient's desire to pray. Yoder's theory of bridging also means the nurse will accommodate the

patient's cultural differences when possible, so the patient knows personal cultural needs are acknowledged and important.

The case study with simulation is an opportunity for the student to learn in a safe environment and become more confident in skills while determining areas that require further experience and education. The instructor will discuss communication between the student and patient and between the student and physician. The student will gain independence and confidence in communicating with physicians through experience. Musinski (1999) acknowledged by communicating with others, the student is becoming interdependent in communication. "The paradigm of 'we' is the indication that the ultimate state called interdependence has been attained" (p. 24).

The educator uses observational and listening skills to give feedback to the student and evaluate the written work of the student; however, relatively few tools are available for the educator for evaluation with high-fidelity simulation. Harder (2010) acknowledged gaps in the educational evaluation process, identifying a "lack of formal evaluation tools available in the evaluation of simulations" (p. 27). Presently educators have used pretest and post-test scores. An area for growth in education is to develop a measureable tool specifically for high-fidelity simulation.

Implementation

The director of the ADN program and the lead nursing instructor are aware of the development of the case study with simulation. Following completion of the project, time will be sought on a faculty meeting agenda to present the case study with simulation as an option for introduction into the first semester term curriculum. When this first case study with simulation is accepted into the week 1 curriculum, development of

comparable educational experiences for nursing students during weeks 2 through 8 can be developed collaboratively by the six clinical nursing instructors.

Published literature has provided valuable information for this project; however, two authors provided significant support for this case study with simulation. Cant and Simon (2009) discussed the value of simulation in learning. They reported twelve studies involved in medium to high fidelity simulation that demonstrated statistical improvements in knowledge, critical thinking, and confidence following the simulation instruction. The case studies with simulation can be assumed to be an effective method of teaching and acquiring new levels of knowledge. Guhde (2010) discussed the opportunity students had to become more self-aware by analyzing their own critical thinking skills leading to modification in their thinking and behavior.

Harder (2010), however, observed that formal tools are currently unavailable to evaluate medium and high fidelity simulation education. In the past, individuals have been using pre- and post-tests for low fidelity simulation, but nothing exists for higher level simulations. Therefore, one area for improvement in this fast-growing field is to prepare evaluation tools for medium and high fidelity simulations.

Summary

This chapter described the case study with simulation created to address a missed clinical in an ADN foundational clinical educational experience. The ADN's first semester clinical syllabus was reviewed so the case study is consistent with course objectives. The students and the metropolitan area where this ADN program is situated are diverse, so this patient's cultural identity was created to reflect this multiculturalism.

In addition to the instructor and student preparation, seven individual sections of the simulation were discussed. Each section reflects Bloom's Taxonomy to guide and evaluate student learning. The chapter also showed how Newman's theory of health as expanding consciousness is applied throughout this case study with simulation. Implementation of the case study with simulation was discussed with current literature to assist the faculty in realizing another alternative to classroom instruction that is currently being used in other institutions. Chapter 4 will present how the case study with simulation will be evaluated.

Chapter Four: Evaluation

This chapter will discuss the evaluation methods used to determine if the case study with simulation was successful. The criteria for success will be reviewed along with an evaluation from students and faculty. These findings will determine the role of case studies with simulation in future foundational nursing classes in the ADN program. A critical analysis of the case study and opportunities to make the case study more realistic across disciplines will be reviewed.

The goal of the project is to develop a make-up clinical nursing experience for the first semester nursing student in an ADN program. The first objective is to achieve the conditions of an actual clinical environment. The school has planned to update the lab into a 21st century learning center equipped with private simulation rooms to emulate a current hospital environment. Presently a curtain is pulled around the area in use to provide privacy. When the actual simulation environment is completed, equipment and controls, such as oxygen meters and suction canisters, will be available for the student to work within real time. This project is to develop the case study with simulation using a manikin to provide the actual patient interaction and diagnostic interventions used in this new lab setting. The addition of equipment will allow for development of more complex case studies with simulation for advanced students.

The second objective is to develop student self-confidence. Learner-centered activities allow students to actually practice what they have learned in the classroom setting. Jefferies (2007) developed a Nursing Education Simulation Framework with five components: the teacher's role, the student's role, educational practice, simulation design characteristics, and outcomes. In this framework, the teacher assumes the roles of

facilitator and evaluator. Students' roles are response and process-based. The proposed supplemental clinical case study and simulation project was developed to be a process-based role. The case study is designed so students must determine the patient's main priority need (pain control) and the interventions and rationales related to this diagnosis. The framework also includes educational practices such as diverse learning styles (visual, auditory, tactical, and kinesthetic), collaboration, and expectations.

These activities develop the students' self-confidence by identifying and reducing their weaknesses. The students have an opportunity to overcome fears in the nursing environment. The self-confidence they gain in the simulation transfers to retaining knowledge. As Brannan et al. discussed, students who participated in high fidelity simulation approaches scored higher on post-tests than those receiving traditional instruction.

The third objective used in the development of this case study with simulation is to promote students' learning safe practices. As identified in the Institute of Medicine initial report in the Quality of Chasm Series (1999), nurses spend the most time with patients and therefore have a better understanding of a patient's current status and can provide safer care. Nurses, however, need the opportunity to practice and learn critical thinking skills in the clinical environment. The case study with simulation to replace a missed clinical is designed to replicate this experience.

Bloom's taxonomy provides a useful framework for teaching critical thinking skills. It has been used in education since 1956 but is fully relevant to the current case study with simulation. Using Bloom's six areas of knowledge consistently -- comprehension, application, analysis, synthesis, and evaluation--students will have a

strong framework for safe practices. Bloom's design helps students arrive at a higher level of overall understanding; they can synthesize and evaluate information. Bloom's Taxonomy supports the view that if a person can't verbalize it, the person doesn't know it.

The fourth objective is to improve students' communication skills. The case study with simulation will provide opportunity for this experience. Musinski (1999) assists students to communicate effectively with their patients. The purpose of education is to assist students from a dependent state of communication to an independent state and help them become confident thinkers with sound judgment. When the student realizes the importance of working across disciplines in nursing, the interdependent communication has been achieved (Covey as cited in Musinski, 1999). The need for the case study to show contradiction provides the student the opportunity to contact the physician and effectively communicate his or her findings.

An evaluation of the case study with simulation will include an open-ended survey. After the first two semesters, the lab instructor and the clinical instructor will complete the survey, providing feedback on the simulation and case study. Sample questions are:

- What did you think of the case study?
- Was the length of time appropriate?
- Would you change anything?
- What areas were strong and weak?
- Would you add anything?

This survey would also be given to students who used this case study with simulation.

Once the findings were evaluated by both the student and faculty, the information could be used to improve the current scenario or to lay the foundation for creating increasingly complex case studies with simulation for each of the remaining 7 weeks of clinical experience.

Critical reflection on the preparation and development of the case study reveals the importance of 3 years of faculty experience in this ADN program as key to recognizing the needs for this semester's nursing education. Once the needs were identified, researching qualitative literature and talking with other faculty to locate the most current information was essential. This case study with simulation can be used as a template for further development of case studies with simulation to supplement missed clinical experiences; future case studies will build upon learning from previous case studies with simulation. The faculty could develop a simulation exercise for each semester with attention to desired skill level of the students in each course. Through collaboration with the deans and directors of other departments such as law enforcement, students could arrive at the simulated scene, then call paramedic students, who could simulate taking the patient to the hospital and exchange detailed information with nursing students. This type of cross departmental work can provide the student the opportunity, as Musinski (1999) discussed, to take their independent communication to an interdependent level.

Literature review completed in preparation for this project provides the groundwork for discussion with colleagues about expanding the scenarios. Opportunities

for developing new case studies with simulation and the creation of evaluation tools to measure the students' learning provide a new frontier that would benefit from more research because these evaluation tools are currently lacking.

This project shows the appropriateness of Margaret Newman's theory as support for this case study with simulation. Newman proposes students use pattern recognition through communication with the patient to gather an overall picture of the situation at hand. Newman's theory (1999) offers a method of approaching the patient as a whole rather than looking at only one aspect (the specific health problem) of the patient's circumstances. Newman's theory of health as expanding consciousness stresses the importance of the nurse entering into a partnership with the patient.

This theory and practice supports achievement of the four objectives of this project: providing the actual clinical environment, developing students' self-confidence, helping students perform safe practices, and communicating with patients for optimal care. Newman's theory originally meant for patient and researcher can be applied to the instructor–student relationship. The instructor evaluates the student with attention to patterns that indicate insecurity. The instructor can embrace the unfolding pattern of the student's knowledge, which is demonstrated through the analysis, critical thinking, and application of patient information. The instructor then guides the student and gives positive reinforcement on the case study and simulation.

Chapter Four presented the evaluation methods used to determine the success of the project. In doing so, the criteria for success are described by the four main project goals and using open-ended survey questions to guide future development of the case study with simulation. A critical reflection of the model was evaluated as was how this

project is supported by Newman's theory and Bloom's taxonomy. Chapter Five will discuss the vision and opportunities for further development and research of this project, insights gained, and implications of findings of advanced nursing practice.

Chapter Five: Discussion

The purpose of this project was to develop a case study scenario and related simulation for associate degree nursing students who miss clinical experiences in a foundational nursing class. The case study with simulation allows students who have missed a clinical round to meet these objectives: experience a realistic nursing setting, improve their self-confidence, learn safe practices, and improve their communication skills.

Implications of the Findings

Through successful case study with simulation, students can receive the full clinical hours required with the practice this entails, and so are better prepared to be nurses. The case study designed for the project was quite complex and gave students a chance to respond to many real-life issues. The case study with simulation was designed so students would ask questions of the patient. The patient (manikin) will be programmed to indicate having abdominal pain and refer to her medical history. The student will be able to see a pattern develop when listening to the patient and communicating information back to the patient. Theorist Margaret Newman's pattern recognition is what drives this case study with simulation and teaches the student the need for good communication and observational skills. Students will gain self-confidence in the process of the simulation, thereby being calm and ready to identify and meet the needs of the patient.

Implications for the Nursing Program

The development of this project means that students who miss a clinical round can still learn in a simulated clinical environment, thus meeting the requirements of the

course. It also provides the teacher with a one-on-one interaction with students and an opportunity to give feedback on students' critical thinking, analysis, and synthesis of information. This project will be significant to developing transformational leaders in nursing. The case study with simulation can be used as a model for other nursing instructors to develop their own case studies throughout this ADN program. This not only helps them to take initiative and improve education practices, thus being transformational leaders themselves, but also teaches the student Newman's pattern recognition. Students in turn will continue this style of behavior showing others this important approach.

Next Steps

A natural extension of this project would be to add seven more case studies to cover all eight weeks of a clinical rotation. This researcher will present the project to the rest of the nursing faculty in the ADN program, and together the team can determine how to develop future case scenarios. For instance, each new case study could correlate to the skills being taught in lecture that week, thus pinpointing the skills that a student needs to review if he or she missed that particular week. Using this project as a template, the other faculty will have the opportunity to develop their own transformational leadership skills as well.

Another opportunity for developing this case study would be to expand the scenarios to include other behavioral sciences and health-related departments. In this way the learning experience can reflect the complex situations that nurses actually encounter. For example, paramedics/emergency medical services might arrive with the patient and give a detailed analysis of the patient's current problems to the nursing students. The

nursing student has to then learn to not only receive information but also to apply the interdependent communication style across disciplines. For instance, the paramedic will discuss what happened to the patient and the vital signs and symptoms the patient is pre sently experiencing. The fourth semester student would then do an assessment with the patient in the emergency room and communicate with the physician. These higher-level, interdisciplinary scenarios could be used in the later semesters of the ADN nursing program.

Future Research

To develop this project even more fully, the researcher could survey nursing instructors at other institutions to learn from their process of developing and integrating case studies not only into the clinical rotation, but also into their main theory courses. The results of this survey would provide information about some of the obstacles others have encountered in developing similar projects.

Students could also be surveyed to see if they would find it helpful to use case studies with simulation as part of their classes. The results might indicate that using hands-on teaching practices would improve the regular class sessions. It is important that nurses be alert to new and improved technology, such as simulation, and to incorporate it into nursing education.

Revelations

This project revealed that the first semester foundational class of this ADN program has been unable to fully meet the needs of students who have missed a clinical. Students need the full clinical experience to adequately learn and implement the skills they are expected to acquire in this semester. While case studies are sometimes used in

this semester, one has not been specifically designed for this ADN program that meets cultural and clinical needs in the way that this case study with simulation does. Without such a replacement case study, students do not have enough practice hours. This researcher, having been involved in two other professions --military and law enforcement -- understands how important it is to have a chance to practice skills in a simulated environment, to learn to anticipate all possible events that could play out. This type of training builds an individual's confidence ahead of time, so that the person is prepared to take action when encountering real-life problems.

In the course of creating this case study with simulation, this researcher realized that the hands-on approach and use of up-to-date technology such as simulation could be assets in the regular classroom. The case scenario and chance to practice skills on a manikin might be usefully incorporated to bring active learning into more parts of the course. This pedagogical shift could address the issue of students' different learning styles, too.

The focus of this project was to develop a case study scenario and related simulation for associate degree nursing students who are absent from clinical experiences in a foundational nursing class. This project provides an alternate activity to apply skills needed to be successful in the clinical environment. Margaret Newman's theory, health as expanding consciousness, supports this case scenario and simulation project. Her theory is that the universal process of expanding consciousness must be part of the illness and healing experience. While many educational theories exist, Bloom's Taxonomy was used to support and achieve this project's goal. Adapting Bloom's tiered model of thinking (his six levels of complexity), this researcher created a case study with

simulation that enabled the student to acquire information and practice skills needed to complete the clinical. The project also offers faculty members in this ADN program a template for developing scenarios for later in the semester or for other semesters in the ADN program. Finally, the case study with simulation provides a different style of learning that could be adopted in other areas of the program. It is this researcher's sincerest wish that the case study with simulation will provide students with an increased level of knowledge, increased confidence, and sense of ethnic pride in furthering their careers as nurses.

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Appendix A

Program/Curriculum Specific Objectives

COURSE OBJECTIVES:

Upon completion of this course, a student will be able to...

1. Perform basic nursing skills according to established criteria.
2. Utilize the nursing process.
3. Demonstrate therapeutic communication.
4. Demonstrate psychosocial nursing care.
5. Collect data.
6. Report collected data.
7. Exhibit documentation skills.
8. Demonstrate nursing interventions.
9. Apply theoretical base to patient situation giving rationale for nursing intervention.
10. Demonstrate organization in providing patient care.
11. Evaluate effects of own nursing action on patient outcomes.
12. Demonstrate safe medication administration.
13. Seek assistance from appropriate source.
14. Demonstrate growth in own nursing role.
15. Demonstrate a sense of caring.

TOPICAL OUTLINE / COURSE CONTENT:

- Application of the nursing process from an established plan of care
- Organization and time management development for one patient
- Implementation of nursing interventions
- Incorporate holism into patient care
- Correlation of theory to implementation of nursing care
- Evaluation of nursing interventions to patient outcomes
- Identification of ordered medication by classification
- Promote critical thinking
- Recognize concepts of health promotion, illness prevention and restoration of health
- Recognize diversity
- Identify role of complementary therapy

Upon completion of the case study with simulation the student will:

1. Prepare a Care Plan for the patient using critical thinking skills
2. Review pathophysiology for the patient's condition and provide written documentation
3. Fill out patient data collection tool
4. Describe all medications
5. Administer enema, insert catheter, and administer pain and hypertension medicine.

Appendix B

PATIENT INFORMATION

Admission Date: 05/01/11 **Today's Date:**

Attending Physician Team: Dr. Johnson

Brief Description of Client: This 58 y.o. Somali female presents with abdominal pain. Pt. has not had Bowel movement for 9 days. It is yet to be determined if patient has an obstruction, possible tumor or ileus. Pt. is a smoker of twenty years.

Name: Nasra Far

Gender: Female Age: 58

Weight: 82 kg. Height: 5"2

Religion: Muslim

Major Support: Family/Friends **Phone:** 612-000-0000

Allergies: PCN, Sulfa

Past Medical/Surgical History: Right Salpingo-Oophorectomy (1998), Cholithasis & Appendectomy (1999). Hysterectomy (2006), Right Mastectomy (2005), Breast Cancer (2005),

Current home medications:

Tamoxifan, 5 mg. p.o. everyday

Metroprolol 50mg, p.o. daily

Lipitor 10 mg p.o. daily

REVIEW OF SYSTEMS:

Vitals signs on admission: Temp. 98.6, B/P.165/90, P 72, R 16

LUNGS: Bilaterally coarse throughout

CARDIAC: Regular

ABDOMEN: round, tender throughout, bowel sounds x 4.

EXTREMITIES: pulses good throughout,

NEURO: intact

GU: urinary incontinence

Patient Report

Patient is a 58 year old Somali female. Patient speaks English. Patient presented to emergency department with abdominal pain. She states her pain is 9/10/ on a scale of one to ten. Tylenol #3 was given in emergency department 6 hr. ago. Patient has not had bowel movement in 9 days. She has just arrived to the medical floor. It is 3:00 p.m. and patient is now settled in her room. There is a stage 1 decubitus ulcer on right buttock with tegaderm applied. Patient is incontinent of urine and is presently nothing by mouth per physician order.

PHYSICIAN ORDERS

NPO
Insert urinary in-dwelling catheter
Give tap water enema
Tylenol #3 1-2 tabs, Q 4-6 hrs. prn. for pain
Dr. John Johnson,

Skills required prior to beginning Simulation:

Hand-washing
Read orders on Information page
View all pages of Case Study
Urinary Catheter supplies
Enema supplies

The educator will ask the student if they have any questions, and the student will verbalize when ready to begin the case study with simulation. Student should begin by meeting patient, taking vitals, and an assessment. Student will then determine if patient needs medication, and if so give. Student will then insert catheter and give enema. Document medications and fill out all paper work and turn into instructor.

Scenario Specific Skills:

Patient assessment
Vital signs
Critical thinking
Develop care plan
Write pathophysiology on patient
Write out medications
Apply in-dwelling catheter and give enema correctly
Pass medications correctly

Appendix C

PATHOPHYSIOLOGY

A. Describe the pathophysiology of the primary medical diagnosis currently having the greatest impact on your patient's/client's health.

B. In your own words:
1) Describe the effect of the disease on the body at the tissue and cellular level.
2) Provide risk factors and etiology of the disease (the cause of the disease)
3) The signs and symptoms of the disease
4) The complications of the disease. What are the long term problems a patient could experience?

C. Highlight the signs and symptoms your patient is experiencing.

D. Using this information, identify the NANDA diagnosis and/or your patient's/client's priority need. Provide reasons why you think this is the priority need.

E. Cite the resources you used to obtain this information in APA style.

Appendix D

Medication Administration Record (MAR)

Allergies: PCN, Sulfa	DX: Abdominal Pain, Hx: Breast Ca., Right Mastectomy, Right Salpingo-Oophorectomy Hysterectomy, Cholithasis, Appendectomy			
Pt name: **Nasra Far**	DOB: 01/08/1952	Age: 58	Room: 302	MD: John Johnson
MR #: 224692				

Start	Stop	Medication	Time	Date	Date	Date
		Tamoxifen 10 mg po daily	0800			
		Lipitor 10 mg po daily	0800			
		Metroprolol 50 mg po daily	0800			
		Pilocarpine 2% one gtt to each eye tid	0800 1300 1800			
		Dulcolax one rectal supp. daily prn				
		Tylenol #3 1-2 TAB po every 6 hr prn				
		Percocet 5 mg po every 6 hr prn				
		Colace 150 mg po daily prn				

Name, Title, Initials	Name, Title, Initials	Name, Title, Initials

Medication Administration Worksheet (p.2)

Patient's initials _____ Student _____

Clinical date(s) _____

Generic and Trade name Classification and Action	Dosage Route Frequency Range Maximum safe dose	Indications for this patient. Why is your patient receiving this medication	Nursing Actions. How to give and special consideration for administration	Side Effects Common Life threatening

Appendix E

Weekly Data Collection Tool

Student Name_____
Patient's initials_____ Room number_____ Date of Cares ___

Oxygen

VS 1. RA___O_2 @____L/min O_2 Sats____

2. RA___O_2 @____L/min O_2 Sats____

3. RA___O_2 @____L/min O_2 Sats____

4. RA___O_2 @____L/min O_2 Sats____

Respiratory
Lung
sounds_____
_____

Physical Assessment_____
_____

Pertinent lab and diagnostic results

Medications

Cardiovascular

Heart sounds

Physical Assessment

Pertinent lab and diagnostic results

Medications

Nutrition

Blood glucose/finger stick _____
Physical assessment:

Diet/tube feeding_____Appetite_____Intake _____
IVhydration/TPN_____Rationale_____

Pertinent lab and diagnostic results

Medications:

Elimination

Renal/Bladder

Assessment

Output
Medications

Bowel

Assessment

Last BM (date)_____
Medications

Other

Pertinent Labs/Diagnostic tests

Physical Comfort and Safety

Pain

Rating Assessment

Medication

Neurologic

LOC/Orientation
Assessment

Medication

Skin
Braden Score_____ Sensory Perception_____ Mositure_____Activity___
Mobility_____ Nutrition_____ Friction and shear___
Assessment:(wounds included here)

Medications

Immune Status
Assessment

Precaution status:

Medications

Pertinent labs and diagnostic tests

Optimal Activity and Rest
Muscuoskeletal
Assessment
Adaptive equipment
ADLs , Activities
Speech _____PT _____OT _____ Reason: _____
Medications

Rest
Assessment

Medications

Psychosocial (Intellectual, emotional, and social function: BON Ability 1800 subpart 3C)

Assessment

Medications

Current treatments

Spiritual well-being

Discharge Plan

Assessment:

Teaching needs:

Appendix F

Nursing Care Plan

Student name_____
Clinical date(s)_____
Pt. initials_____

Analysis of Data (for 1st and 2nd semester identifies and reports findings that need further assessment by the RN.)
Biophysical

Psychosocial

Nursing Diagnosis RN Practice Role (1st and 2nd semester student will have this validated by RN ____)

Expected Outcomes RN practice role
Long Term Outcome

Short term outcomes	Evaluation of patients progress towards outcomes (RN and PN Practice Role)	Modification of Outcomes (RN Practice Role)
1.		
2.		

Interventions RN and PN Practice role and PN Practice role

1.

2.

3.

4.

5.

6.

Rationales RN

1.

2.

3.

4.

5.

6.

Cite References Used

Teaching implemented

1st year from an established plan of care

2nd year –created by student

Recognize patient's and family's understanding or barriers to learning

Self-evaluation of clinical:

What went well? What needs improvement? How do you plan to make that improvement?

Appendix G

General Questions

1. Ms. Far asks "Why do you turn me off my back every two hours? What is your response?

2. Describe the procedure for the tap water enema?

3. How would you determine if the enema was effective?

4. Are there any medications that you would hold? Why or why not?

5. Are there any medications that you would give? Why or why not?

6. What were the top three priorities for this patient after hearing report?

7. The patient asks if she and relatives can pray in her room. What is your response?

8. The patient's friends come to visit and 8:45 p.m. and want to visit and stay overnight. There are five female friends. What is your response?